Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A process for packing a fixed-bed shell-and-tube reactor with solid particulate material, with the fixed-bed shell-and-tube reactor having a plurality of reaction tubes, with the process comprising the steps of:

~~wherein a solid particulate material is weighed so as to be uniform volume, and is packed in each reaction tube in a packing time of not shorter than 30 seconds per liter~~

a) weighing out a predefined amount of said solid particulate material for each of the reaction tubes according to a density of said solid particulate material such that each of the reaction tubes will have a uniform volume of said solid particulate material; and then

b) packing said predefined amount of said solid particulate material into each of the reaction tubes.

2. (currently amended) A process for packing a fixed-bed shell-and-tube reactor according to claim 1, ~~wherein the packing of the solid particulate material is carried out so that the pressure drop of the plurality of reaction tubes will be each in the range of 85 to 115 % of the average pressure drop, wherein the pressure drop is caused by packing the solid particulate material~~ wherein each of the reaction tubes includes a pressure drop, with each of the pressure drops being in a range of 85 to 115 % of an average pressure drop of said plurality of reaction tubes.

3. (currently amended) A process for packing a fixed-bed shell-and-tube reactor according to claim 1, ~~wherein the~~

~~packing of the solid particulate material is carried out so that the length of a layer of the packed solid particulate material in the plurality of reaction tubes will be each in the range of 90 to 110 % of the average length of the packed layer~~ wherein said predefined amount of solid particulate material, after being packed in said reaction tube, has a length, with each of the lengths being in a range of 90 to 110 % of an average length.

4. (currently amended) A process for packing a fixed-bed shell-and-tube reactor according to claim 1, ~~wherein the tube diameter of the reaction tube is in the range of 15 to 50 mm~~ wherein each of said reaction tubes includes a tube diameter, with said tube diameter being in a range of 15 to 50 mm.

5. (currently amended) A process for packing a fixed-bed shell-and-tube reactor according to ~~claim 4~~ claim 1, ~~wherein the ratio of the diameter of the solid particulate material and the tube diameter is in the range of 0.1/1 to 0.5/1~~ wherein said solid particulate material includes a plurality of particles, with each of the particles having a particle diameter, wherein each of the reaction tubes includes a tube diameter, and wherein the ratio of particle diameter to tube diameter falls in a range of 0.1/1 to 0.5/1.

6. (canceled).

7. (currently amended) ~~A production process for each substance, which comprises the step of using the fixed-bed shell-and-tube reactor as recited in claim 6~~ A process for packing a fixed-bed shell-and-tube reactor according to

claim 1, wherein said step of packing occurs in a time span of not shorter than 30 seconds per liter of said solid particulate material.

8. (new) A process for packing a fixed-bed shell-and-tube reactor according to claim 1, wherein said step of packing occurs in a time range of 30 to 120 seconds per liter of said solid particulate material.

9. (new) A process for producing ethylene oxide, which comprises the steps of:

packing a solid particulate catalyst into a fixed-bed shell-and-tube reactor by the process for packing a fixed-bed shell-and-tube reactor as recited in claim 1, wherein the solid particulate catalyst includes silver as an essential component;

thereafter introducing an oxygen-containing reaction gas into the fixed-bed shell-and-tube reactor, wherein the oxygen-containing reaction gas includes ethylene; and

thereafter oxidizing said ethylene in the presence of the solid particulate catalyst in a gas phase to thereby obtain ethylene oxide.

10. (new) A process for producing (meth)acrolein and (meth)acrylic acid, which comprises the steps of:

packing a solid particulate catalyst into a fixed-bed shell-and-tube reactor by the process for packing a fixed-bed shell-and-tube reactor as recited in claim 1, wherein the solid particulate catalyst includes molybdenum, bismuth, and iron as essential components;

thereafter introducing an oxygen-containing reaction gas into the fixed-bed shell-and-tube reactor, wherein the oxygen-containing reaction gas includes propylene,

isobutylene, tert-butanol, and/or methyl tert-butyl ether; and

thereafter oxidizing said propylene, isobutylene, tert-butanol, and/or methyl tert-butyl ether in the presence of the solid particulate catalyst in a gas phase to thereby obtain (meth)acrolein and (meth)acrylic acid.

11. (new) A process for producing acrylic acid, which comprises the steps of:

packing a solid particulate catalyst into a fixed-bed shell-and-tube reactor by the process for packing a fixed-bed shell-and-tube reactor as recited in claim 1, wherein the solid particulate catalyst includes molybdenum and vanadium as essential components;

thereafter introducing an oxygen-containing reaction gas into the fixed-bed shell-and-tube reactor, wherein the oxygen-containing reaction gas includes acrolein; and

thereafter oxidizing said acrolein in the presence of the solid particulate catalyst in a gas phase to thereby obtain acrylic acid.

12. (new) A process for producing methacrylic acid, which comprises the steps of:

packing a solid particulate catalyst into a fixed-bed shell-and-tube reactor by the process for packing a fixed-bed shell-and-tube reactor as recited in claim 1, wherein the solid particulate catalyst includes molybdenum and phosphorus as essential components;

thereafter introducing an oxygen-containing reaction gas into the fixed-bed shell-and-tube reactor, wherein the oxygen-containing reaction gas includes methacrolein; and

thereafter oxidizing said methacrolein in the presence of the solid particulate catalyst in a gas phase to thereby obtain methacrylic acid.

13. (new) A process for producing phthalic anhydride, which comprises the steps of:

packing a solid particulate catalyst into a fixed-bed shell-and-tube reactor by the process for packing a fixed-bed shell-and-tube reactor as recited in claim 1, wherein the solid particulate catalyst includes vanadium and titanium as essential components;

thereafter introducing an oxygen-containing reaction gas into the fixed-bed shell-and-tube reactor, wherein the oxygen-containing reaction gas includes o-xylene and/or naphthalene; and

thereafter oxidizing said o-xylene and/or naphthalene in the presence of the solid particulate catalyst in a gas phase to thereby obtain phthalic anhydride.

14. (new) A process for producing maleic anhydride, which comprises the steps of:

packing a solid particulate catalyst into a fixed-bed shell-and-tube reactor by the process for packing a fixed-bed shell-and-tube reactor as recited in claim 1, wherein the solid particulate catalyst includes molybdenum as an essential component;

thereafter introducing an oxygen-containing reaction gas into the fixed-bed shell-and-tube reactor, wherein the oxygen-containing reaction gas includes benzene; and

thereafter oxidizing said benzene in the presence of the solid particulate catalyst in a gas phase to thereby obtain maleic anhydride.

15. (new) A process for producing maleic anhydride, which comprises the steps of:

packing a solid particulate catalyst into a fixed-bed shell-and-tube reactor by the process for packing a fixed-bed shell-and-tube reactor as recited in claim 1, wherein the solid particulate catalyst includes phosphorus and vanadium as essential components;

thereafter introducing an oxygen-containing reaction gas into the fixed-bed shell-and-tube reactor, wherein the oxygen-containing reaction gas includes n-butane; and

thereafter oxidizing said n-butane in the presence of the solid particulate catalyst in a gas phase to thereby obtain maleic anhydride.

16. (new) A process for producing propylene, acrolein, and/or acrylic acid, which comprises the steps of:

packing a solid particulate catalyst into a fixed-bed shell-and-tube reactor by the process for packing a fixed-bed shell-and-tube reactor as recited in claim 1, wherein the solid particulate catalyst includes molybdenum as an essential component;

thereafter introducing an oxygen-containing reaction gas into the fixed-bed shell-and-tube reactor, wherein the oxygen-containing reaction gas includes propane; and

thereafter oxidizing said propane in the presence of the solid particulate catalyst in a gas phase to thereby obtain propylene, acrolein, and/or acrylic acid.

17. (new) A process for producing pyromellitic anhydride, which comprises the steps of:

packing a solid particulate catalyst into a fixed-bed shell-and-tube reactor by the process for packing a fixed-bed shell-and-tube reactor as recited in claim 1, wherein

the solid particulate catalyst includes vanadium as an essential component;

thereafter introducing an oxygen-containing reaction gas into the fixed-bed shell-and-tube reactor, wherein the oxygen-containing reaction gas includes durene; and

thereafter oxidizing said durene in the presence of the solid particulate catalyst in a gas phase to thereby obtain pyromellitic anhydride.

18. (new) A process for packing a fixed-bed shell-and-tube reactor according to claim 1, and further comprising, prior to the step of weighing out a predefined amount of said solid particulate material, the steps of:

a) packing a receptacle with said solid particulate material; then

b) determining a weight of said solid particulate material that has been packed into said receptacle whereby a bulk density is determined; and then

c) using said weight to assign a weight value to the predefined amount of said solid particulate material.

19. (new) A process for packing a fixed-bed shell-and-tube reactor according to claim 1, and further comprising, prior to the step of weighing out a predefined amount of said solid particulate material, the step of determining an apparent density of said solid particulate material to assign a weight value for said predefined amount of said solid particulate material is determined.

20. (new) A process for packing a fixed-bed shell-and-tube reactor according to claim 1, and further comprising the step of making at least two production lots of the solid particulate material, and with a density of the solid

particulate material of one production lot being different from a density of the solid particulate material of another production lot.